IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please ADD new claims 16 and 17 in accordance with the following:

1. (Original) A synchronous control device for controllably driving a servomotor, comprising:

a position control unit for outputting velocity commands at each predetermined cycle on the basis of the position deviation between position feedback from a position detector and position command transmitted at each predetermined sampling cycle from a host control device or a host control unit, and

a velocity control unit for outputting torque commands at each predetermined cycle on the basis of velocity feedback from velocity detectors and the velocity commands, wherein

said synchronous control device synchronously controls two servomotors for driving the same control object and further comprises means for reducing the force that acts between the two servomotors on the basis of the force that acts between the two servomotors.

2. (Original) The synchronous control device according to claim 1, wherein the position control unit comprises:

a position deviation offset calculation processor for calculating the offset amount of the position deviation on the basis of the force that acts between the two servomotors, and

means for adding the position deviation offset amount calculated by the position deviation offset calculation processor to the position deviation.

3. (Original) The synchronous control device according to claim 2, wherein the position deviation offset calculation processor computes the force that acts between the two servomotors from the difference in the torque commands given to the two servomotors, and calculates the position deviation offset amount by multiplying the computed difference by a conversion coefficient.

4. (Original) The synchronous control device according to claim 2, wherein the

position deviation offset calculation processor computes the force that acts between the two servomotors from the actual electric currents that flow into the two servomotors, and calculates the position deviation offset amount by multiplying the computed difference by a conversion coefficient.

5. (Original) The synchronous control device according to claim 1, wherein the position control unit comprises a position deviation offset calculation processor for calculating the offset amount of the position deviation when the difference between the forces on the two servomotors exceeds a fixed value, and means for adding the position deviation offset amount calculated by the position deviation offset calculation processor to the position deviation.

6. (Original) The synchronous control device according to claim 5, wherein the position deviation offset calculation processor computes the force that acts between the two servomotors from the difference in the torque commands given to the two servomotors, and calculates the position deviation offset amount by multiplying the computed difference, or the quantity obtained by subtracting a fixed value from the difference, by a conversion coefficient.

7. (Original) The synchronous control device according to claim 5, wherein the position deviation offset calculation processor computes the force that acts between the two servomotors from the difference in the actual electric currents that flow into the two servomotors, and calculates the position deviation offset amount by multiplying the computed difference, or the quantity obtained by subtracting a fixed value from the difference, by a conversion coefficient.

8. (Original) The synchronous control device according to any of claims 2 to 7, wherein the position deviation offset calculation processor comprises adjusting means for changing the position deviation offset amount at a frequency that is sufficiently lower than the frequency band of the position control unit.

9. (Original) The synchronous control device according to claim 1, wherein the position control unit comprises a position command offset calculation processor for calculating the offset amount of said position command on the basis of the force that acts between the two servomotors, and means for adding the position command offset amount that was calculated by the position command offset calculation processor to the position command.

10. (Original) The synchronous control device according to claim 9, wherein the position deviation offset calculation processor computes the force that acts between the two servomotors from the difference in the torque commands given to the two servomotors, and calculates the position command offset amount by multiplying the computed difference by a conversion coefficient.

11. (Original) The synchronous control device according to claim 9, wherein the position deviation offset calculation processor computes the force that acts between the two servomotors from the actual electric currents that flow into the two servomotors, and calculates the position command offset amount by multiplying the computed difference by a conversion coefficient.

12. (Original) The synchronous control device according to claim 1, wherein the position control unit comprises a position command offset calculation processor for calculating the offset amount of the position command when the difference between the forces on the two servomotors exceeds a fixed value, and means for adding the position command offset amount calculated by the position command offset calculation processor to the position command.

13. (Original) The synchronous control device according to claim 12, wherein the position command offset calculation processor computes the force that acts between the two servomotors from the difference in the torque commands given to the two servomotors, and calculates the position command offset amount by multiplying the computed difference, or the quantity obtained by subtracting a fixed value from the difference, by a conversion coefficient.

14. (Original) The synchronous control device according to claim 12, wherein the position command offset calculation processor computes the force that acts between the two servomotors from the difference in the actual electric currents that flow into the two servomotors, and calculates the position command offset amount by multiplying the computed difference, or the quantity obtained by subtracting a fixed value from the difference, by a conversion coefficient.

15. (Original) The synchronous control device according to any of claims 9 to 14, wherein the position command offset calculation processor comprises adjusting means for

changing the position command offset amount at a frequency that is sufficiently lower than the frequency band of the position control unit.

16. (New) A synchronous control device to controllably drive a servomotor, comprising:

a position control unit to output velocity commands at each predetermined cycle on the basis of the position deviation between position feedback from a position detector and position command transmitted at each predetermined sampling cycle from a host control device or a host control unit; and

a velocity control unit to output torque commands at each predetermined cycle on the basis of velocity feedback from velocity detectors and the velocity commands, wherein

said synchronous control device synchronously controls two servomotors to drive the same control object and reduces the force that acts between the two servomotors on the basis of the force that acts between the two servomotors.

17. (New) A synchronous control device, comprising:

at least two servomotors to move a workpiece; and

a computing part to compute a force that acts between the two servomotors, wherein

the synchronous control device controls such that the force between the two servomotors is reduced.